



TRIODE-PENTODE

DESCRIPTION AND RATING

The 19JN8 is a miniature tube containing a sharp-cutoff pentode and a medium-mu triode.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC* 18.9 Volts

Heater Current† 0.15 ± 0.01 Amperes

Direct Interelectrode Capacitances‡

Pentode Section

Grid-Number 1 to Plate, maximum:

(g1 to p) 0.01 pf

Input: Pg1 to (h + Pk + Pg2 + Pg3 + i.s.) . . . 5.5 pf

Output: Pp to (h + Pk + Pg2 + Pg3 + i.s.) . . . 3.4 pf

Triode Section

Grid to Plate: (g to p) 1.7 pf

Input: g to (h + Tk + Pk + Pg3 + i.s.) 3.2 pf

Output: p to (h + Tk + Pk + Pg3 + i.s.) 2.2 pf

MECHANICAL

Mounting Position—Any

Envelope—T-6½, Glass

Base—E9-1, Small Button 9-Pin

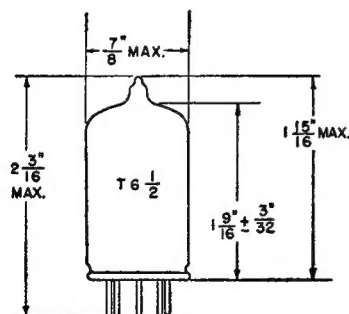
Outline Drawing—EIA 6-2

Maximum Diameter $\frac{7}{8}$ Inches

Maximum Over-all Length $2\frac{3}{16}$ Inches

Maximum Seated Height $1\frac{15}{16}$ Inches

PHYSICAL DIMENSIONS



EIA 6-2

TERMINAL CONNECTIONS

Pin 1—Triode Grid

Pin 2—Triode Plate

Pin 3—Triode Cathode

Pin 4—Heater

Pin 5—Heater

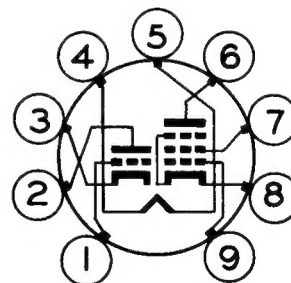
Pin 6—Pentode Plate

Pin 7—Pentode Grid Number 2
(Screen)

Pin 8—Pentode Cathode, Grid
Number 3, and Internal
Shield

Pin 9—Pentode Grid Number 1

BASING DIAGRAM



EIA 9FA

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

	Pentode Section	Triode Section	
Plate Voltage.....	300	300	Volts
Screen Supply Voltage.....	300	...	Volts
Screen Voltage—See Screen Rating Chart			
Positive DC Grid-Number 1 Voltage.....	0	0	Volts
Plate Dissipation.....	2.5	2.5	Watts
Screen Dissipation.....	0.55	...	Watts
Heater-Cathode Voltage			
Heater Positive with Respect to Cathode			
DC Component.....	100	100	Volts
Total DC and Peak.....	200	200	Volts
Heater Negative with Respect to Cathode			
Total DC and Peak.....	200	200	Volts
Grid-Number 1 Circuit Resistance			
With Fixed Bias.....	2.2	2.2	Megohms
With Cathode Bias.....	2.2	2.2	Megohms

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

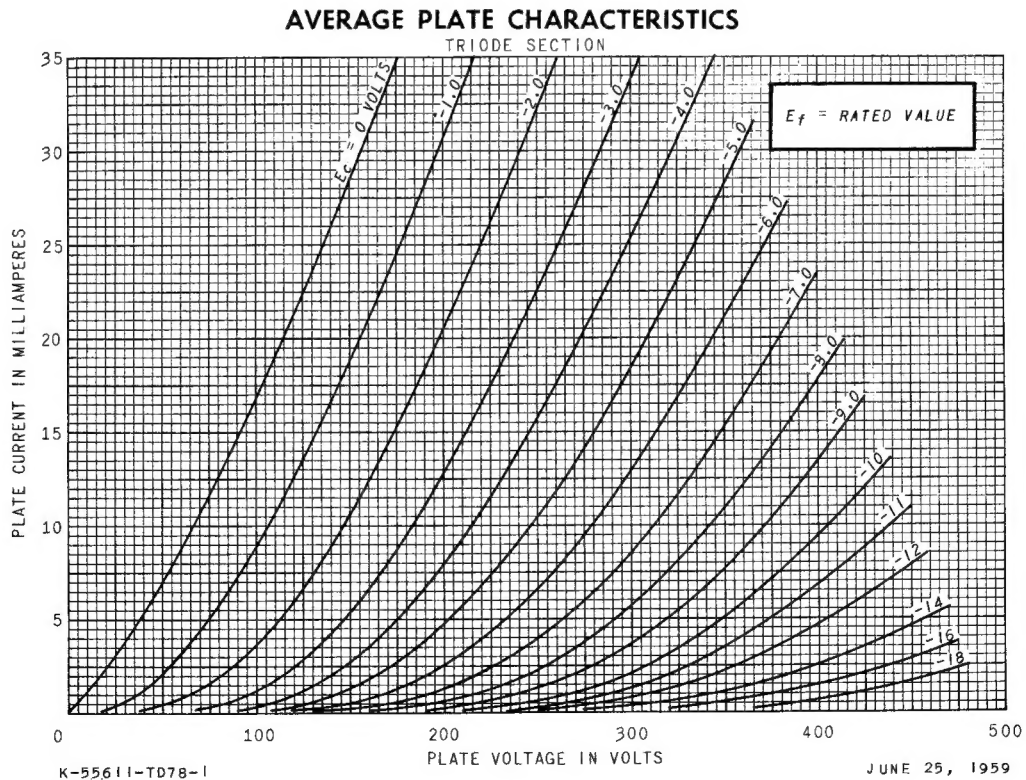
AVERAGE CHARACTERISTICS

	Pentode Section	Triode Section	
Plate Voltage.....	125	125	Volts
Screen Voltage.....	125	...	Volts
Grid-Number 1 Voltage.....	-1.0	-1.0	Volts
Amplification Factor.....		46	
Plate Resistance, approximate.....	200000	5400	Ohms
Transconductance.....	7500	8500	Micromhos
Plate Current.....	12	13.5	Milliamperes
Screen Current.....	4.0	...	Milliamperes
Grid-Number 1 Voltage, approximate			
Ib = 10 Microamperes.....	-8	-8	Volts

- * Heater voltage for a bogey tube at $I_f = 0.15$ amperes.
- † For series heater operation, the equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.
- ‡ With external shield (EIA 315) connected to cathode of section under test.

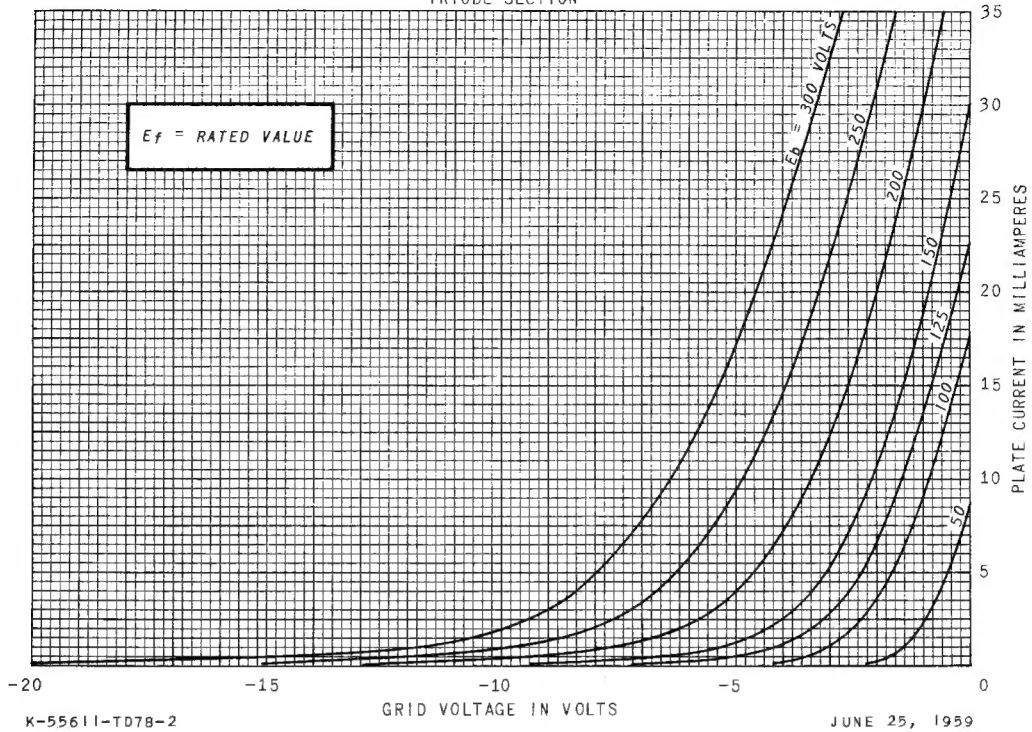
The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or

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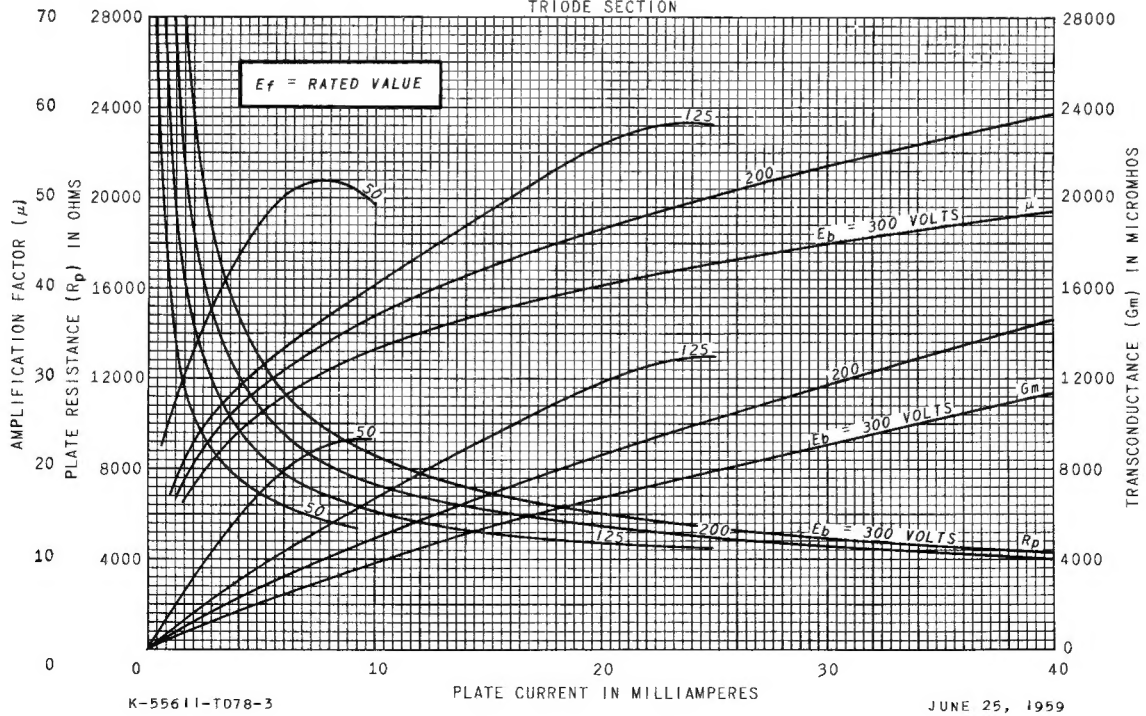
AVERAGE TRANSFER CHARACTERISTICS

TRIODE SECTION



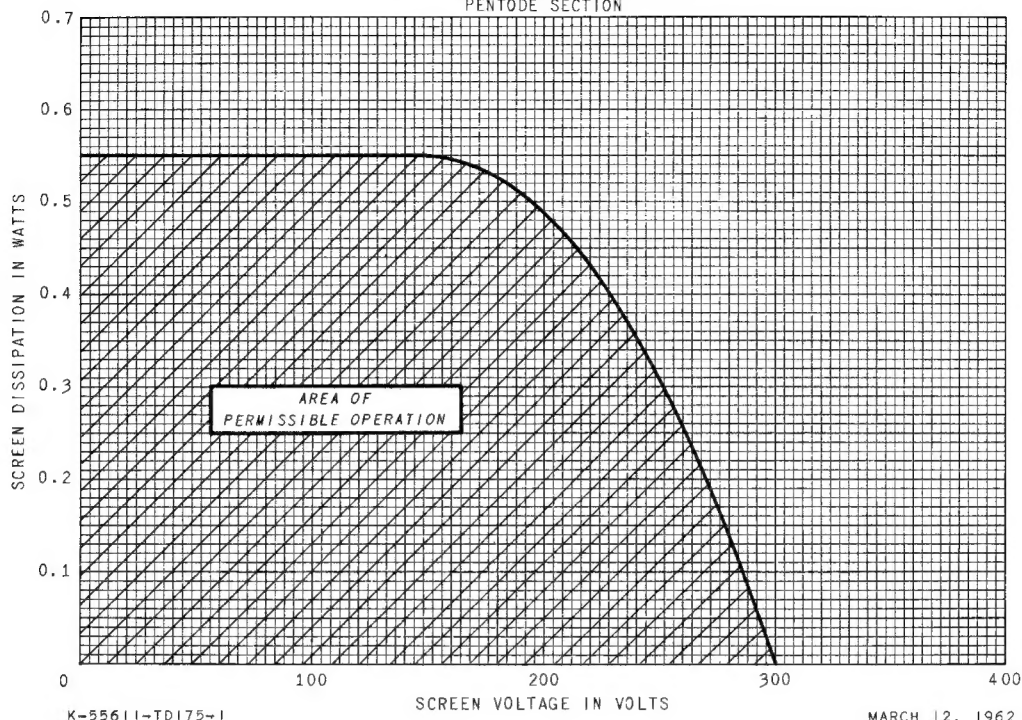
AVERAGE CHARACTERISTICS

TRIODE SECTION



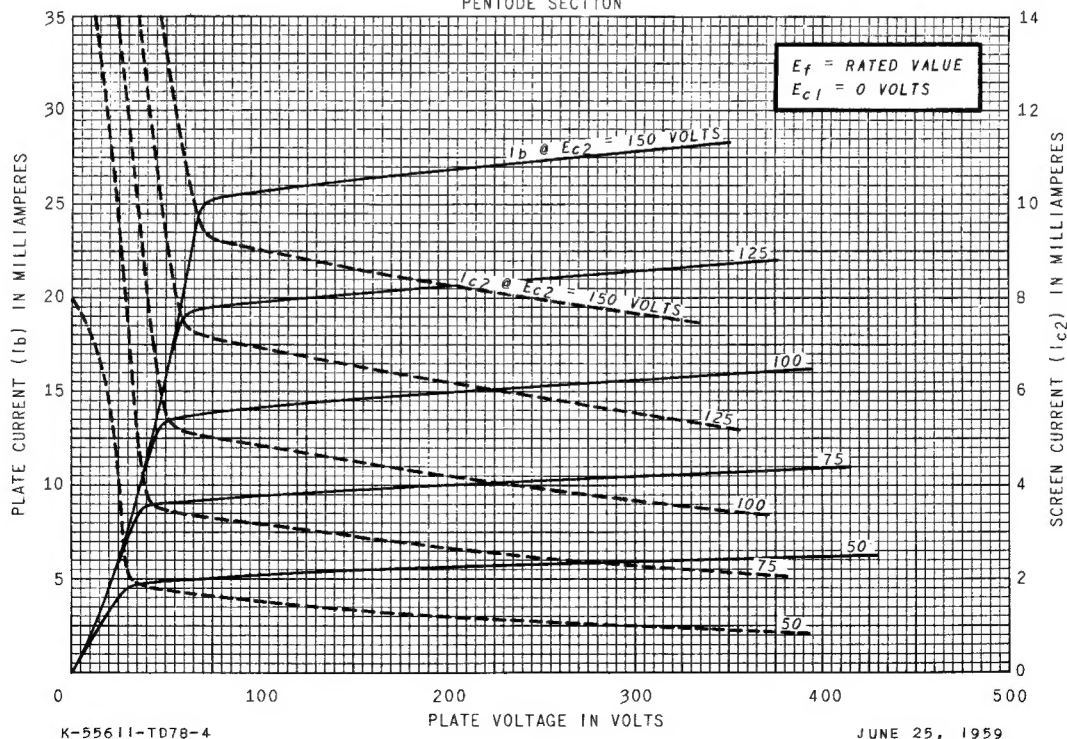
SCREEN RATING CHART

PENTODE SECTION



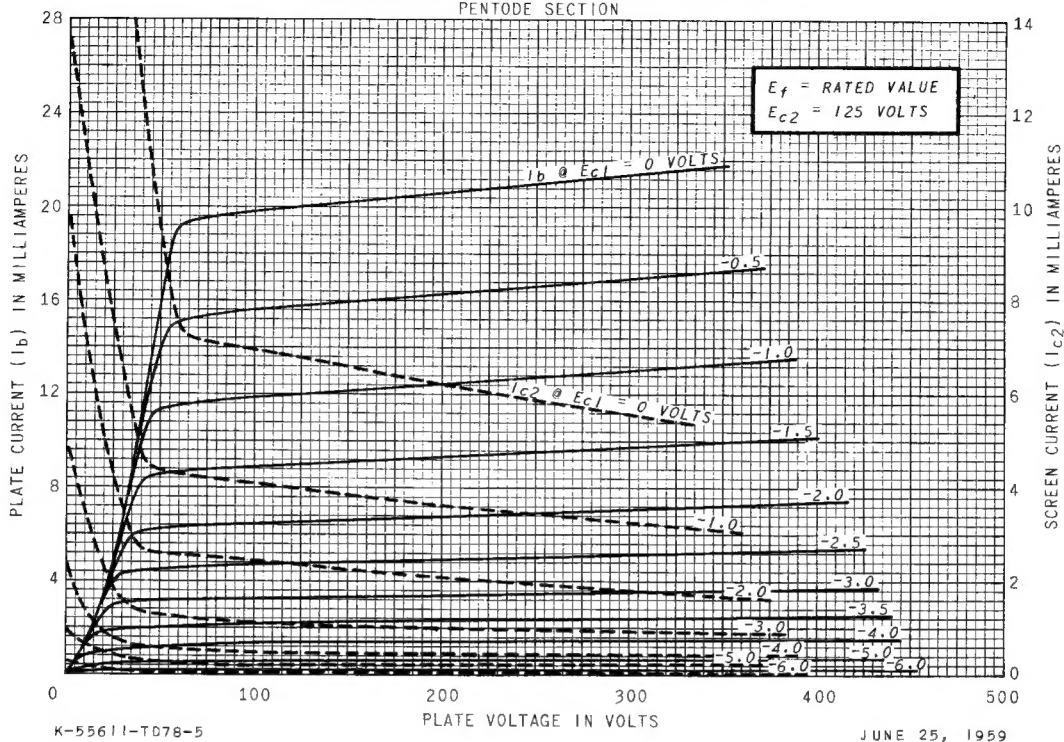
AVERAGE PLATE CHARACTERISTICS

PENTODE SECTION



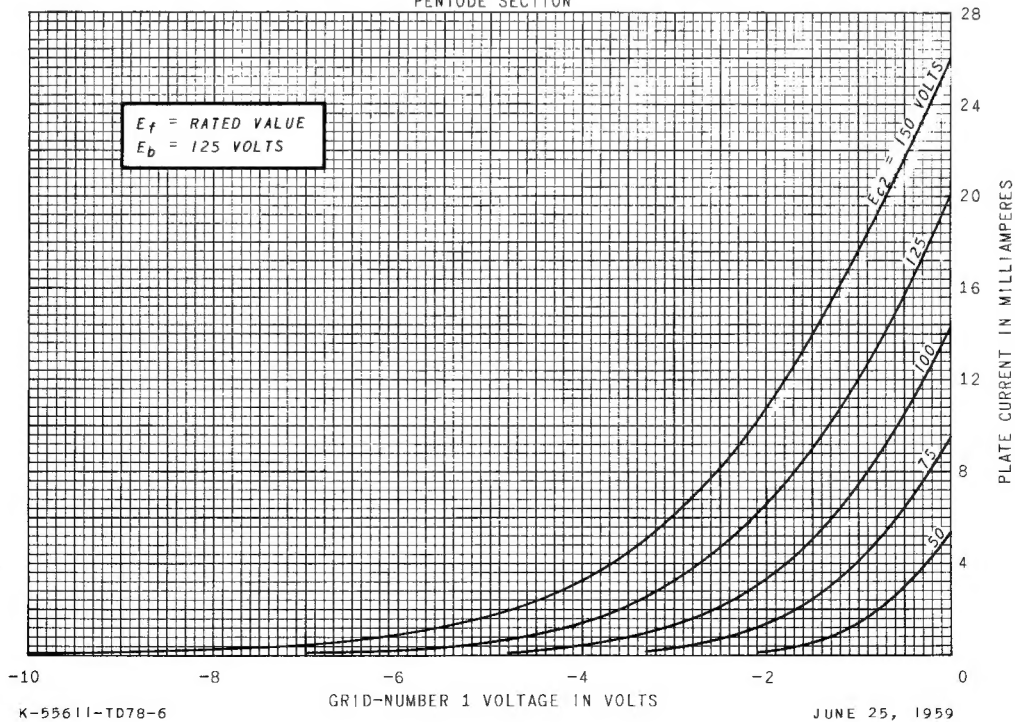
AVERAGE PLATE CHARACTERISTICS

PENTODE SECTION

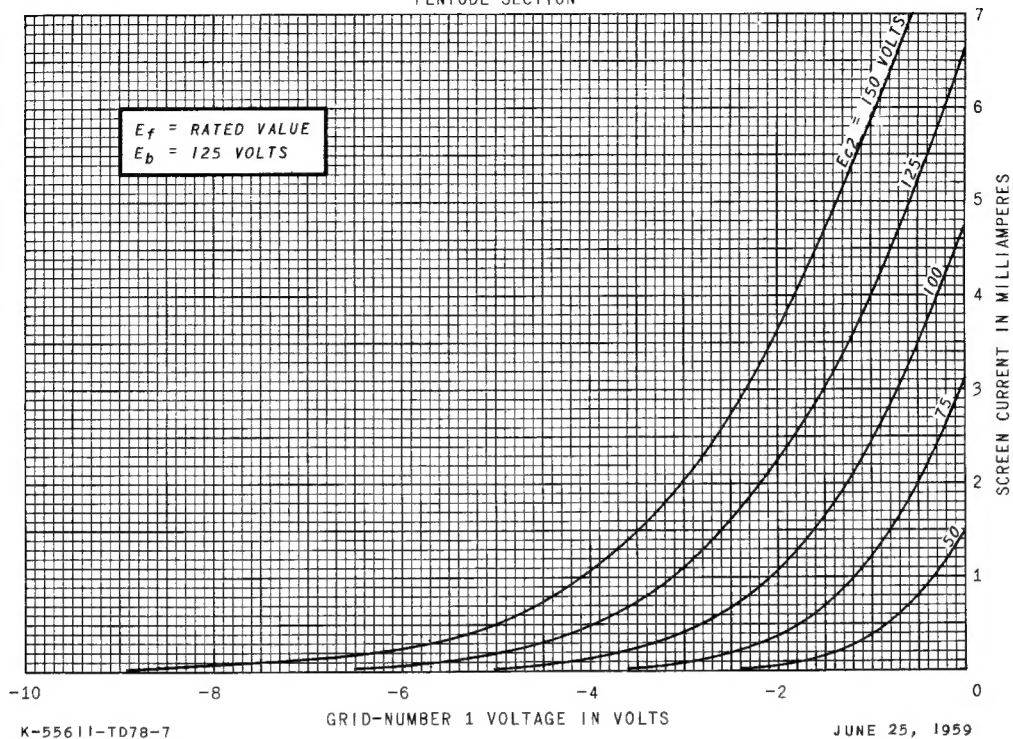


AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION



AVERAGE TRANSFER CHARACTERISTICS PENTODE SECTION



AVERAGE TRANSFER CHARACTERISTICS PENTODE SECTION

